

# MONTHLY WEATHER REVIEW.

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## INTRODUCTION.

The MONTHLY WEATHER REVIEW for December, 1905, is based on data from about 3470 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 176; West Indian Service, cable and mail, 13; River and Flood Service, regular 52, special river and rainfall, 363, special rainfall only, 98; cooperative observers, domestic and foreign, 2565; total Weather Bureau Service, 3267; Canadian Meteorological Service, by telegraph and mail, 33; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Jamaica Weather Service, 130.

Since December, 1904, the Weather Bureau has received an average of about 1700 reports from as many observers and vessels, giving international simultaneous observations over the Atlantic and Pacific oceans at 12 noon, Greenwich time, or 7 a. m., seventy-fifth meridian time. These are charted, and, with the corresponding land observations, will form the framework for daily weather charts of the globe.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, General Superintendent of the United States Life-Saving Service; Capt. H. M. Hodges, U. S. N. (Retired), Hydrographer, United States Navy; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; H. H. Cousins, Chemist, in charge of

the Jamaica Weather Office; Señor Enrique A. Del Monte, Director of the Meteorological Service of the Republic of Cuba; Rev. L. Gangóiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba.

Attention is called to the fact that at regular Weather Bureau stations all data intended for the Central Office at Washington are recorded on seventy-fifth meridian or eastern standard time, except that hourly records of wind velocity and direction, temperature, and sunshine are entered on the respective local standards of time. As far as practicable, only the seventy-fifth meridian standard of time, which is exactly five hours behind Greenwich time, is used in the text of the REVIEW. The standards used by the public in the United States and Canada and by the cooperative observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is  $157^{\circ} 30'$ , or  $10^{\text{h}} 30^{\text{m}}$  west of Greenwich. The Costa Rican standard meridian is that of San José,  $5^{\text{h}} 36^{\text{m}}$  west of Greenwich.

Barometric pressures, whether "station pressures" or "sea-level pressures", are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

In conformity with Instructions No. 43, March 29, 1905, the designation "voluntary", as applied to the class of observers performing services under the direction of the Weather Bureau without a stated compensation in money, is discontinued, and the designation "cooperative", will be used instead in all official publications and correspondence.

Hereafter the titles of the respective forecast districts will be as used in the current REVIEW to accord with paragraph 236 of Station Regulations, dated June 15, 1905.

## FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

On December 20 the first regular meteorological observation at noon, Greenwich time, received by the Weather Bureau at Washington from mid-ocean was dispatched through the Marconi Company by the American S. S. *New York*, in latitude  $40^{\circ}$  north, longitude  $48^{\circ}$  west. The service of transmitting observations from vessels equipped with the Marconi apparatus is now regularly conducted by the *New York*, *Philadelphia*, *St. Louis* and *St. Paul*, of the American Steamship Line, and an extension of the service to the other steamships, as facilities for transmission and the needs of the Weather Bureau demand, is contemplated.

Along the transatlantic steamer routes east of the Banks of Newfoundland and thence southward over the Azores the weather of the latter part of December was severe. Over the western Atlantic storms of pronounced severity occurred with intervening intervals of about five days.

In the United States a larger proportion of the barometric disturbances crossed the southeastern districts, where the month was cold and wet. The remaining low areas passed from the British Northwest Territory over or near the Great Lakes, and the weather of the northern portions of the United States east of the Rocky Mountains was unusually warm and

dry. No well-defined low area traversed the Plateau and Pacific coast States, and the month in those States was generally cool and dry. During the latter half of the month, however, the passage of barometric depressions over the British Possessions was attended by gales on the north Pacific coast.

The first important storm of the month in the United States moved from the southeastern portion of the Gulf of Mexico to the Canadian Maritime Provinces from the 8th to 10th. This storm increased in strength during its passage up the coast, and on the 10th was attended by wind velocities of 60 miles an hour on the New York and New England coasts. Five days later a storm that had apparently originated in the subtropical regions of the West Indies appeared off Hatteras and moved slowly northeastward. Vessel reports indicate that from the 14th to 16th the gales that attended this storm were violent. Under the influence of this low area, and of high area VI, the first snowstorm of the season in the Middle Atlantic States occurred on the 15th. Low area IX was attended by heavy rain in the west Gulf States on the 19th, and in the east Gulf and South Atlantic States on the 20th. During the 20th low area IXa moved northward near the south Atlantic coast causing heavy rain at night in the Middle Atlantic States.